

**Notice of Allowability**

Application No.

10/643,968

Examiner

Kaity Handal

Applicant(s)

CERQUEIRA ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/22/2007.
2. ☒ The allowed claim(s) is/are 1-9, 11 and 13-41.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700

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### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Raul Tamayo on 4/13/2007.

The application has been amended as follows:

2. Replaced claim 1 with the following: An apparatus for stripping hydrocarbons from fluidized solid particles counter-currently with a gaseous stripping fluid, said apparatus being part of a separator vessel and comprising:

- a) an approximately vertical stripping chamber;
- b) several sets of segmented, parallel baffles arranged in rows on an axis;
- c) a fluid-distributing device for feeding a gaseous stripping fluid; and
- d) a grid to collect refractory and coke debris,

said stripping chamber comprising a zone of downward circulation of the suspended particles counter-currently to said fluid, with the sets of segmented baffles being oriented so that rows of a level of segmented, parallel baffles are offset relative to rows of another level of segmented, parallel baffles on said axis, where the thickness and separation of said sets of baffles is so dimensioned as to reduce coalescence of the formed bubbles and optimize the hydrocarbons desorption from said fluidized solid particles,

wherein said several sets of segmented, parallel baffles arranged in rows comprise a first set of baffles, each baffle within the first set having a first geometry, followed by a second set of baffles, each baffle within the second set having a second geometry, and wherein said first geometry and said second geometry are not the same.

3. Replaced claim 6 with the following: An apparatus according to claim 1, wherein each set comprises two segmented, baffle plates arranged in sequence.

4. Replaced claim 7 with the following: An apparatus according to claim 1, wherein each set comprises three segmented, baffle plates arranged in sequence.

5. Replaced claim 8 as follows: An apparatus according to claim 1, wherein impinging sets of baffles are oriented so as to be offset relative to the next set of baffles, allowing the gaseous flow to meet an impinging surface able to reduce coalescence of the stripping fluid bubbles.

6. Cancelled claim 10.

7. Claim 11, line 2, inserted the word --- alternating --- after the word "comprise".

8. Claim 13, in line 3, inserted --- said upper donut is supported by a lower donut, --- before "and successively."

9. Claim 14, in line 1, deleted the word "pairs" after the word "first" and replaced it with the word --- sets ---.

10. Replaced claim 37 with the following: A process for stripping hydrocarbons from fluidized solid particles in a stripping zone associated with a fluid catalytic cracking reactor wherein said stripping zone removes hydrocarbons from a continuously

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circulating stream of fluidized particulate catalyst by contact with a stripping gas, said process comprising:

- a) contacting a particulate catalyst with hydrocarbons;
- b) disengaging hydrocarbon vapors from said catalyst particles to yield catalyst particles having adsorbed hydrocarbons thereon;
- c) passing said catalyst particles having adsorbed hydrocarbons downwardly through a vertical stripping chamber past a series of sets of at least two parallel, segmented baffle plates on an axis, with the segments being oriented so that rows of a level of parallel, segmented baffles are offset relative to rows of another level of parallel, segmented baffles on said axis, where the thickness and separation of said sets of baffles is so dimensioned as to reduce coalescence of the formed bubbles and optimize hydrocarbons desorption from the catalyst, by virtue of the parallel segmentation the catalyst flowing homogeneously vertically as well as horizontally so as to prevent stagnation zones;
- d) withdrawing stripped catalyst particles from the bottom of said stripping zone;
- e) distributing stripping fluid along the stripper apparatus comprising said segmented sets of baffles while reducing coalescence of bubbles; and
- f) withdrawing stripping fluid and recovered hydrocarbons from the top of said stripping zone,

wherein said series of sets of at least two parallel, segmented baffle plates each comprises a first set of baffles, each baffle within the first set having a first geometry,

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followed by a second set of baffles, each baffle within the second set having a second geometry, and wherein said first geometry and said second geometry are not the same.

11. Added new claim 41: An apparatus according to claim 15, wherein rips in a baffle of a set are offset relative to rips in the next baffle of the set

12. The following is an examiner's statement of reasons for allowance: The hydrocarbon stripping apparatus as claimed wherein said several sets of segmented, parallel baffles are arranged in rows; when combined with having therein a first set of baffles, each baffle within the first set having a first geometry, followed by a second set of baffles, each baffle within the second set having a second geometry, and wherein said first geometry and said second geometry are not the same, the combination is missing from any prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaity Handal whose telephone number is (571) 272-8520. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KH

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4/16/2007



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